

Transportation Curriculum Coordination Council (TCCC) Meeting June 11–12, 2002, Santa Fe, New Mexico

Welcoming Remarks & FHWA Update

Howe Crockett of the Federal Highway Administration (FHWA) opened the meeting with news of some recent TCCC successes. These include the TCCC pooled fund being endorsed by the American Association of State Highway and Transportation Officials (AASHTO) and the continuing progress being made on the Geotechnical course. Jim Sorenson of FHWA told the group that it represents a real diversity in the highway transportation network. First the regional work groups were formed and then they started working with AASHTO. The ongoing purpose is to get quality training out there so that States can get quality work done. Three years ago, it was decided to bring the training groups together. A good start has been made but now it's a matter of keeping the institution going and moving forward.

“Results Through Innovation”—Pete Rahn, New Mexico State Highway and Transportation Department (NMSHTD)

Pete Rahn, Secretary of the NMSHTD, told the TCCC members that the responsibility of management is to establish direction. Staff have to demand that they get the training that they need to get their job done. The NMSHTD has changed from an organization with a very militaristic style (information flowed up and decisions flowed down) to one that is participative. It has been a remarkable change. They can see the results.

Rahn also discussed the reconstruction of the I-40 and I-25 interchanges. This project involved 111 lane miles and 55 bridges. The \$291 million reconstruction took 22 months and 3 weeks. Normally, an endeavour this size would have taken 6 years. The design was done in 16 months. Change orders amounted to only 2 percent. The project was constructed so quickly that drivers were rewarded for every hour of delay that they experienced. A New Mexico TV station did a survey of 500 local residents: 51 percent gave the project an excellent rating, 35 percent called it good, and only 1 percent gave it a

poor rating. The project “succeeded because of our willingness to think out of the box,” said Rahn.

New Mexico has also pioneered the use of long-term warranties. A 111-mile four-lane road, for example, was constructed in 28 months with a 20-year warranty. Around the State, there are currently five major congestion relief projects. All of this has been done with 10 percent fewer employees. “You need to free up employees so that they can make decisions to get the job done,” said Rahn. Employees also need to be held accountable with performance measurements. The best people possible should be hired for positions. NMSHTD now requires a high school diploma or a GED. The agency provides tutors for those who want to get their GED.

New Mexico has created hiring panels to review applicants for supervisory positions. Since doing so, the agency has received zero complaints about preselection for positions. Lower-level position panels have three people, while higher-level positions have panels of five people. One person must be from outside the State government. This has changed the kind of people who are getting hired. Four of the agency’s six division engineers came from maintenance. Traditionally they had always come from construction.

Highway agencies must also focus on what they’re delivering to their ultimate customer. Customers are the ones who give you resources and then expect something in return.

New Mexico has set a goal of 80 hours of training for each employee every year. Members of an organization have to buy into the vision and make a commitment. “We have to give employees the freedom, the skills, and the tools to get the job done,” said Rahn. Every area of NMSHTD has a different training plan.

“What we’re talking about here is crucial to the future of our industry,” said Rahn. The United States is probably behind the curve when it looks at what other countries have done. Sweden, New Zealand, Great Britain, and Australia have all privatized their road agencies. “We have to do it better because there are alternatives to us out there. We’re in competition with the private sector whether we realize it or not,” he said.

NMSHTD has some innovative practices. For example, the agency hires people into temporary positions. After 4–6 weeks, if they’re looking good, then they are trained to fill the positions that are needed. This gives the agency the opportunity to screen people

and also to train them. NMSHTD has also changed the nature of its job by privatizing the maintenance of rest areas.

Rahn concluded his remarks by stating, “If you provide resources based on a vision or certain tangible results, then your organization aligns itself with that vision.”

Gabriel Alcaraz—Puerto Rican Highway & Transportation Authority (PRHTA)

The Highway and Transportation Authority is a Public Corporation, with the DOT’s Secretary serving as Chairman of the Board. PRHTA employs 300 engineers and has a CIP budget of \$450 million to \$600 million a year. Challenges facing the Authority include:

- a. Language barriers, as most training materials are in English, most PRHTA personnel is Spanish-speaking, and Spanish is not a technical language and it is often difficult to translate specifications, etc.
- b. Quality of construction and employee training was not a priority.
- c. National Highway Institute (NHI) courses are good for engineers but are too technical for inspectors.
- d. By law, the agency cannot make significant expenditures on training for inspectors, since most inspectors are not career service.
- e. The agency’s Personnel Development office is oriented to personnel wellness, but is not good at identifying technical training.

For solutions to these challenges, PRHTA has turned to its Materials Testing Office and external resources, such as consultants and FHWA. PRHTA’s Materials Testing Office is highly dedicated and with support from FHWA has developed training materials for inspectors and materials technicians.

PRHTA, in conjunction with FHWA Puerto Rico Division personnel, has developed and offered courses in Maintenance of Traffic, Work Zone Safety, and Bridge Deck Inspections, as well as a “Train the Trainer” course.

A long-term solution that is being looked at is obtaining assistance from AAFET, which is Puerto Rico’s equivalent of the Job Corps. AAFET offers technical certificates; PRHTA is working on getting it to offer a Transportation Inspector’s Certificate. Ongoing concerns include:

- PRHTA certifications vs. ACI certifications.
- Are courses developed elsewhere as effective or relevant in Puerto Rico?
- Different specifications.
- Different weather—For example, Puerto Rico has about 85 percent relative humidity (RH) versus an RH of 15 percent in New Mexico.

WAQTC Update—John Tenison, NMSHTD

Modules are offered for asphalt, concrete, soils, and embankments. Bridge inspection and Superpave modules are under development. Modules include instructors' guides, exams, Powerpoint presentations, and video clips. There has been interesting dialogue between States that are just beginning to participate and States that have a lot of experience. It is important to have modules that States can customize to fit their own needs. WAQTC is also working on a pooled fund proposal to have an administrator run its program. It is willing to put its material on the Web.

Sorenson commented that training and certification will still rest largely with the regional groups. Lee Onstott of NMSHTD said, "We're not here to dictate to the States. We're here to provide resources." Sorenson added that, "We're not here to reinvent the wheel. We need to decide what a solid curricula looks like."

M-TRAC—Chris Anderson, Iowa Department of Transportation (DOT)

M-TRAC began in 1994. The group met in June 2001 at its annual workshop. Its next workshop will be held August 13–14 in Kansas City, Kansas. M-TRAC is struggling right now. It is having difficulties both financially and with the stability of the group. Many people who were involved have retired, etc. Anderson is hoping that they can regroup at the meeting in August. M-TRAC would also like to learn from other groups.

North Dakota is the only M-TRAC State to date to indicate that it will not be participating in the pooled fund. However, not all States have responded yet. It takes some pushing to get the money. Anderson asked if a benefit/cost analysis study of training has been done to show the benefits of training. She would like to pursue this. According to Sorenson, an NCHRP study was done by the University of Maryland. It is unpublished.

Linda Mason of the Transportation Research Board (TRB) agreed to work with Anderson to draft a statement of work to present to TRB.

Anderson noted that M-TRAC is not getting as much financial support from the FHWA Resource Center as it used to. Sorenson suggested that she talk to the Midwestern Partnership for Pavement Preservation, as they also have an interest in training. The group should also look at the model of the asphalt user-producer groups. Bryan Cawley and Gary White were suggested as contacts at the Midwestern Resource Center.

SETFTTQ Update—Tom Malerk, Florida DOT

SETFTTQ has established programs that are working well. So far there have not been any requests for reciprocity. Information sharing between States is routine. FHWA's Southern Resource Center houses a program library and there is information on the SETFTTQ Web site. The group has developed a policy statement on recertification: "SETFTTQ members will establish written and proficiency examinations as a standard for recertification. Work experience may be considered, but shall not be the sole basis for requalification eligibility."

Issues for TCCC consideration include how the group can assist the TCCC in transferring SETFTTQ information to the TCCC Web site. SETFTTQ is soliciting member State support for the TCCC pooled fund. The group would also like to discuss the process for evaluating and prioritizing the TCCC work plan and would like the TCCC to consider measuring training effectiveness.

NETTCP Update—Rick Hale, Vermont Agency of Transportation

Hale circulated copies of the group's Paving Inspector manual for the TCCC to look at. The manual is used with a 2 1/2-day class. In 2002, courses that have been held include HMA Paving Inspector, HMA Plant Inspection, Soils and Aggregate, Concrete Technician, and Concrete Field Inspector. Since 1996, 2,900 certifications have been issued (some technicians have multiple certifications). They have also held their first round of recertification. A new QA technologist course will be available by winter 2003. The group is also implementing a scholarship program. Currently, training materials are not available online.

MARTCP Update—Woody Hood, Maryland DOT

Hood reported that all of the MARTCP's manuals are generic in nature. A course is available in Pavement Markings and HMA Plant and Field Technician. An Aggregate Technician course is being finalized. The group uses an ACI Concrete Field course. Hood reported that he is a member of the Steering and Development committees updating the NICET Construction Materials Testing National Certification Program. MARTCP is also in the final stages of signing a Partnership Agreement with NICET that will facilitate reciprocity between MARTCP and NICET certification programs. There is a tremendous back-up of people who need training, as contractors have a lot of turnover. Hood noted that, "We are seeing that people who have already gone through training are training others on the job." Recertification is an issue, as a lot of people are coming to the end of their 5-year certifications. For the Mid-Atlantic pooled fund, it might be better if the group takes a percentage of States' capital programs, instead of asking for the same amount from every State.

AASHTO Maintenance Update—Bob Peda, PENNDOT

The Maintenance Subcommittee has set a goal of coming up with a core maintenance curriculum. The Subcommittee is also working to update NICET's Highway Maintenance Certification Program modules so that they relate better and has developed a 2-week Assistant County Manager training program.

AASHTO Materials Update—Tom Malerk, Florida DOT

The Subcommittee on Materials has recognized the TCCC and has assigned Malerk as a liaison. The next AASHTO Subcommittee meeting will be in Branson, Missouri, in August.

AASHTO Construction Update—Lee Onstott, NMSHTD

Onstott reported that "there's a lot of skepticism out there. People are questioning why we're doing this. Education is important." He sent out notices to construction engineers letting them know about the pooled fund. "This next year is going to be critical to the

success of the group. We've got to show some results and make sure there's a product out there that justifies our existence," he noted.

Geotechnical Inspector Certification Program—Peter Osborn, FHWA

The goal is to develop a nationally accepted qualification program that will improve qualifications and ensure uniformity. The program is being coordinated with the regional certification groups. It will be administered through these regional groups and will also likely be offered through NHI. Proposed modules include "Driven Pile Foundations" and "Drilled Shaft Foundations." Regional representatives on the Technical Working Group (TWG) include Ashton Lawler (VDOT), Chris Berda (Vermont AOT) and Garth Newman (Idaho DOT). The TWG also has technical support from industry, including the Pile Drivers Contracting Association, Association of Drilled Shaft Contractors, and the Deep Foundations Institute.

The TWG was formed in October 2000, following a nationwide survey that showed that "States wanted us to develop some kind of program." A lot of money is being wasted on overdesigning foundations. Funding has been received from FHWA and NHI.

A Deep Foundation Inspection course is now under development. It is modeled after the proven Florida DOT program. The first two modules will be Drilled Shaft and Driven Pile. Contracts were awarded in Fall 2001 to Parsons Brinckerhoff for the Driven Pile module and to Ryan Berg for the Drilled Shafts module. The kick-off meeting was held in November 2001. Technical walk-throughs were held June 5–6. The Drilled Shaft module provides an overview of the drilled shaft construction process and the role of the inspector. Basic course requirements are that it must be taught for the novice inspector and it must cover the FHWA guide spec. It also covers the construction process and equipment, coordination, and communication.

A pilot presentation of the Driven Pile module will be held July 30–August 1, 2002, in Milford, Massachusetts. The Drilled Shaft module will be piloted August 13–15, 2002, in Portland, Oregon. The pilots are intended for States within those regional groups. The target audience is inspectors, so that they can evaluate the content. Final Deliverables are due September 30, including the Participants' Workbook, Instructor's Guide, Visual Aids, Sample Exam, and Implementation Guide. The course materials will be available on

CD. The sample exam is being protected and is not widely available. It is being sent only to TWG members. The NHI cost of the course will probably be about \$250 or \$260. Crockett suggested that it would be good to have more of a mix of people at the pilots. Some trainers should be added.

Sorenson commented that it is hoped that a core group of FHWA and State personnel can be put together to teach NHI courses. This cuts down on costs.

What comes next? The TWG is looking at developing Driven Pile and Drilled Shaft tutorials. The TWG has reviewed a Florida DOT Driven Pile tutorial and found it to be excellent. The TWG would like to make use of it. Would the TCCC be willing to participate in the development of the Drilled Shaft tutorial? The TWG is looking for about a \$10,000 TCCC contribution. There is also a need for a math tutorial for inspectors. Anderson noted that her research group has a math tutorial that the TWG could reference. The tutorial goes from basic addition/subtraction up to statistics.

Also next on the list for development is a Subsurface Investigation course. This is pending a funding source.

Pooled Fund Update—Jim Sorenson, FHWA

About \$195,000 has been pledged to the pooled fund, including a \$100,000 contribution from Texas. Only 8 States have responded officially to the letter that went out about the fund. Administration of the fund will be kept within FHWA headquarters. The fund can be supported by industry and other groups (a handout was distributed on this subject). No maximum or minimum has been set for fund contributions. The goal is a million dollars annually, which would generate about 8 to 12 projects a year.

NHI will be used as a contracting source but the fund will not be restricted to NHI contractors. NHI can do task orders directly to States. It is trying to make sure that it can deliver the projects. However, it is looking to the States and TCCC to develop the projects. Money can be saved if a preexisting course can simply be updated.

Bryan Cawley from the Midwestern Resource Center has been asked to step in and help fill John Perry's role. Some operational guidelines need to be developed for the pooled fund. The first step is setting up a management structure. Sorenson thinks that an executive director should be brought on. He estimates that this would take about 7 to 10

percent of the project costs. He advocates putting out a draft contract for this. He noted that, “In 6 months when we meet, we’ll roll out something that is much more strategically oriented.”

Hopefully, there will be uniform information sharing among the regional groups and others. TCCC has made a start on this with the Web site but there hasn’t been enough money to polish up the site.

Brainstorming followed on the management structure for the pooled fund and the Web site. Comments included:

- House Web site at NHI.
- Funding needs to be simple.
- Pooled-fund money can be tagged for specific areas, such as geotechnical.
- Resource centers need to talk to their divisions and promote/market the pooled fund.
- Someone in each State needs to track the pooled-fund letter and make sure it went to the right person.
- Is there a need for an executive committee to make decisions? Would such a committee have equal representation from all disciplines (construction, materials, maintenance, etc.)?
- Should a priority matrix be put together?
- Eventually, NPHQ might provide a home for this initiative.

An August update on the status of the pooled fund will be distributed. Another pooled-fund mailing will also go out.

TCCC Web Site Update—Chris Newman, NHI

There is now a direct link to the TCCC site on the NHI main page. The Web site contains links to all of the regional certification groups. Currently, a database is being compiled for training courses. Users will be able to search for courses both nationally and regionally. Newman would like to put NHI’s database administrator in touch with the regional groups so that information can be shared. It was suggested that courses under development should be listed also. The site should tell visitors when the information was last updated. Crockett suggested that a template should be created for putting in course updates and that a notice should be put on the site saying that it is “Under Construction.” Sorenson noted that he

envisioned a “Needs Matrix.” The group could then cast votes on the matrix and select priorities. Other suggestions included:

- Differentiate on Web site between costs for attending courses and costs for course materials.
- Should there be email notification when new items are posted on the site?
- Should an order form be added? Perhaps as a link back to the regional groups?
- How should State updates be institutionalized?
- Announcements of new courses could be combined with a request to update existing courses.
- There should be a search option for industry information also.
- Course information should indicate whether it’s a national core course for certification or just a training course.

Michael Smith of FHWA and Chris Newman will continue work on the Web site.

Sorenson noted that Michelle Cribbs from his office could also provide assistance. Smith will send everyone a strategic plan for the site. According to Newman, the original data entry on courses will be done by the regional groups. Hood suggested that regional groups volunteer one person to work on the Web site. States should follow NHI’s recommended formats as much as possible (Word and PowerPoint).

National Certification Conference—Chris Anderson, Iowa DOT

Anderson reported that she has worked hard on this concept but that there is no money right now to put it on. Crockett made the recommendation that it be held in conjunction with the National Training Directors meeting. Sorenson asked Newman to check on whether NHI could co-fund the event. Hood commented that most of the people who get invited to the Training Directors meeting are from Human Resources (HR). Will technical people be able to go also? Newman commented that “it is important to get HR people on our side also.” Sorenson suggested that a proposal for the meeting be made this summer, in order to get some buy-in. Anderson will work with Bob Peda, Paula McGee, and Linda Mason on putting together a scope of work. According to Newman, NHI can also champion this.

NHI Course Updates—Chris Newman, NHI

Newman reported that the HMA Construction course (No. 131032) was piloted a few weeks ago, while the pilot for the HMA Production Facilities course (No. 131044) will be next week in Utah. The pilot for HMA Materials, Characteristics, and Control (No. 131045) will be in 2 weeks in College Park, Maryland. The Asphalt Pavement Recycling Technology course (No. 131050) was piloted in May in Albuquerque, New Mexico. Newman should have the final materials for that in a couple of weeks. He will distribute course materials to all of the resource centers and anyone within the TCCC who wants them. Right now, it cannot be called an NHI course if States teach it themselves but Newman is confident that this policy is going to change.

Other courses under development include Managing Construction Workmanship, which came out of an AASHTO SOC resolution. The course covers acceptance, communication, and risk assessment. It is designed for inspectors, resident engineers, and contractor personnel. The RFP for course development will go out in mid June. Also under development is Principles of Writing Highway Construction Specs. This is an update of existing course materials. The kickoff meeting was held in April 2002 and work is expected to be completed by November 2002. Newman commented that when courses are developed, existing materials should be looked at before an RFP is put out and work starts.

Another course being updated is Avoiding and Handling Construction Contract Claims. The RFP will go out in June. Two pavement preservation courses are available (Design and Construction of Quality Preventive Maintenance Treatments and Integrating Preventive Maintenance and Pavement Management Systems), while two more are in development. A Highway Materials course (No. 131023) was revised by the University of Nevada at Reno this year. It includes modules for Quality Control, Portland Cement Concrete, Hot-Mix Asphalt, Steel, Aggregates, and Soils. Other available courses include Bridge Maintenance (No. 134029), Bridge Management (No. 130080), and Introduction to Mechanistic Design. A course on “Pavement Smoothness—Factors Affecting Inertial Profilers Used for Construction Quality Control” (No. 131100) will be delivered soon.

Newman will provide course materials to each regional group, the resource centers, and FHWA division offices. Mason asked about what kind of access NHI has to materials developed by others. Newman replied that it is limited.

Instructor Development Course—Chris Anderson, Iowa DOT

Anderson reported that she attended the NHI course in Indianapolis in April to see if it would be useful to the TCCC. She found it to be an excellent course, although it would need to be shortened for TCCC purposes (the course is currently 4 1/2 days).

Workmanship Training Requirements—Allan Samuels, Arizona DOT

According to Samuels, there is not a lot available on this subject. An industry-wide effort is needed to address this issue. Are there any 100-percent end result specs? Some striping specs fall into this category and pavement smoothness specs are getting there, but that is about it.

American Concrete Institute (ACI) Update—Tom Malerk, Florida DOT

Malerk provided an update from the ACI National Meeting, which was held April 20–25, 2002, in Detroit, Michigan. ACI Certification Programs include:

- Field Testing Technician. This program was revised to include new ASTM standards in 2002. A Quality Assurance program will begin in 2003.
- Aggregate Technician. There has been activity in several States. It is a requirement in Kansas and Florida. About 1,000 people have been certified under this program.
- Laboratory Technician. ACI's Laboratory Technician policy has been revised to include reciprocity for completed test methods among individual laboratory certifications. ACI programs satisfy CCRL lab accreditation requirements for certification of laboratory technicians.
- Transportation Inspector. This course is aimed at lead inspectors and project engineers. However, customers are suggesting that this is beyond what they really need. Approximately 250 certifications were issued in 2001, which represented a dramatic increase over previous years.

ACI has a fixed price for examinations and reference materials. Training and examination sessions are priced by sponsoring groups based on local market standards. More information can be found on the ACI Web site at www.concrete.org.

Superpave ETG for Communications and Training—Linda Mason, TRB

The TRB Superpave Committee advises FHWA and AASHTO on the evolution and implementation of Superpave. Twenty major research projects are either now underway or have been recommended. Three ETGs advise the committee: the Binder ETG, Mix/Aggregate ETG, and Communications/Training ETG. The Communications/Training ETG's goals include promoting current and consistent Superpave training materials and developing a centralized core curriculum that will be useful to State and local agencies and industry. The question was raised as to whether TRB would be in the position of producing modular training. No decisions have been made as yet. However, Mason believes that there will be a recommendation to have a central Web site that existing courses can be fed into. The Web site would also make available the most current updates to Superpave course material. Are the goals of the ETG and the TCCC similar enough for the groups to collaborate and share information? Onstott commented that the purpose of the TCCC is to prevent TRB from going out and hiring someone to develop what already exists. Mason responded that most Superpave training is developed by NHI and the five regional Superpave centers. The ETG's goal is to make those courses easily available to anyone who needs them. WAQTC has developed a Superpave program and New Mexico has its own program. It's possible that the TCCC Web site could have a section on Superpave technology.

PENNDOT Transportation University—Bob Peda, Chris Drda, PENNDOT

PENNDOT is having great success with the university. Its mission is to provide products and services that support the achievement of the Department's goals and objectives. The University has eight colleges, including the College of Transportation Trades and the College of Transportation Professions. Employees are encouraged to develop a work plan for their training. PENNDOT's goal is for every employee to receive 40 hours of training each year. The eventual goal is to have training on the Internet.

Courses offered by the College of Transportation Professions include:

- Construction Management Training Workshop
- Senior Inspector in Charge

- Inspector's Training Conference
- Foreman's Academy
- Assistant County Manager Academy
- Maintenance Executive Development Program.

The plan is to develop a Position Analysis Workbook for every job classification. These workbooks will address career development issues and duties in the workplace. They can be used when interviewing job candidates, orienting new employees, structuring cross-training experiences, and planning training and developmental activities.

The Academies are very interested in the training that the TCCC is preparing.

TCCC Curriculum Tracks—Harold VonQuintus, ERES-ARA

The goal is to develop a comprehensive curriculum to provide guidance in preparing instructional material for training construction personnel. The project team for developing the draft curriculum track included Harold VonQuintus, Doug Hanson of the National Center for Asphalt Technology, Jim Sorenson, Chris Newman, Mike Ayers of the American Concrete Pavement Association, and Dave Newcomb of the National Asphalt Pavement Association. A preliminary draft of the curriculum was distributed. The curriculum has eight main areas:

- Statistics & Statistical Concepts/Procedures for Pavement Engineering & Construction
- Pavement Materials
- Geotechnical—Soils/Foundation for Pavement Construction
- Pavement Design and Rehabilitation
- Construction and Maintenance
- Specifications and Construction Management
- Work Zone and Highway Safety
- Project Personnel Management.

The group started with a review of existing training course materials and has expanded from there. Assumptions made by the team include that training will be at the national level through NHI. Certification would be at the regional or local level. The maximum

length of courses would be 2–3 days. Attendees would gain short bursts of knowledge or information.

Comments included:

- Should primary audience be agency personnel? It is important to include contractors.
- Need to plan for new specs that might be adopted this year.
- Focus seems to be on pavements.
- There are a wide range of skills out there. Some people don't even know how to work a hand-held calculator. Math classes need to have more of a gradation.
- There is a lot of overlapping material. How much is too much?
- There are some very positive aspects to having this curriculum.
- What is the correlation with performance-related specs (PRS)? According to Sorenson, this past winter the PRS team broke into five separate task groups.
- Other topics that could be added include Environment and Snow & Ice.

Gaps in training and missing topics identified by the team include:

- Performance tests (to be added after NCHRP project is completed).
- Database application to QA and acceptance of pavement construction.
- Surface characteristics (profile, noise, friction).
- Surface and subsurface drainage inspections.

A final draft of the curriculum is due June 30.

Resident Engineer Academies—Tim Chavez, NMSHTD

A team visited academies in California, Washington State, and Maryland/Virginia. California's program is a 1-week endeavor designed for newly hired managers and resident engineers. In Washington, employees have to take courses until they get to a level where they're running projects on their own. Washington's program was very impressive.

States say that they need "soft skills" training the most. This includes public relations, contract administration, and how to deal with landowners and business owners, etc. Onstott commented, "I'm not sure there is a single answer. We've seen several models and thought that the team's reports could present different models that States could consider."

Training Effectiveness Evaluation—Tom Malerk, Florida DOT

Malerk proposed establishing a national task team to evaluate the effectiveness of training following the changes that were made to 23 C.F.R. 637. The evaluation would look at whether training would result in a better product. Douglas Townes of Florida DOT has offered to lead this effort. “Is it too soon to draw conclusions?,” asked Sorenson. He proposed that the group define parameters to measure in the future. This effort could be combined with Anderson’s National Training Committee. It was decided that this committee (Chris Anderson, Bob Peda, Paula McGee, Linda Mason, Chris Newman, Mike Arasteh of FHWA, and Douglas Townes) will draft a scope of work for a national synthesis on training effectiveness evaluation, as well as a scope of work for a National Certification Conference.

DOT Key Contact List—Woody Hood, Maryland DOT

Hood suggested that the regional groups and individual States should develop a list of key contacts in such areas as materials, construction, bridges, etc. This would help in getting TCCC mailings to the right people at the DOTs.

Computer Based Training—Mike Moravec, FHWA

Moravec would be willing to coordinate the production of CDs once the core curriculum has been set. His contractors will be available in May 2003. The CDs would be 508 compliant and could have a pre-test and post-test component. According to Moravec, his contractors can turn out about one module a month. Sorenson commented that the product could be introduced into the public domain and still sold through McTrans. Sorenson suggested that the Construction RFP could be converted to include this. However, the group did not reach consensus on that issue. Comments included:

- Construction would only be a small part of this.
- Start with materials.
- There is no definite curriculum yet.
- Anything that is done has to be interactive and state of the practice.

Moravec will put together a proposal for the August AASHTO meeting. Samuels will coordinate with VonQuintus and work on developing a matrix. The construction area will be targeted initially. Perhaps TCCC can fund some modules.

Work Plan Discussion

Sorenson stated that an executive director needs to be brought on board to 1) Work with the pooled-fund donors and participants; 2) Take care of organizing meetings; and 3) Develop scope of operations and business plan. This person should be in place to develop the draft business plan before the next TCCC meeting. The draft RFP for this position will be sent out to all TCCC members (a nondisclosure statement will be sent first). Sorenson suggested creating an executive committee also. A Technical Panel will be put together to make the final selection on the executive director. Sorenson hopes to have responses to the RFP by the end of August.

Curricula Tracks

It was decided that the curricula will be divided into Construction; Materials; Maintenance; Employee Development; and Safety Features, Work Zones, and Worker Safety. The following working groups were set up for each curricula track:

Construction

Allan Samuels, Arizona DOT (lead)

Bernie Kuta, FHWA

Lee Onstott, NMSHTD

Paula McGee, NMSHTD

Bud Darby, NICET

Materials

Woody Hood, Maryland DOT (lead)

Tom Malerk, Florida DOT

Bryan Cawley, FHWA

Garth Newman, Idaho DOT

Bud Darby, NICET

Maintenance

Bob Peda, PENNDOT (lead)

Bud Darby, NICET

[Note: They will try to add a training specialist also].

Employee Development

Chris Anderson, Iowa DOT (lead)

Steve Sawyer, Oklahoma DOT

Tim Chavez, NMSHTD

Chris Newman, NHI

Safety Features, Work Zones, and Worker Safety

Jack Cowsert, North Carolina DOT (lead)

Scott Battles, FHWA

Bill Bruemmer, FHWA

Sorenson will work with the five groups to get additional States involved. The teams will look at the draft curricula developed by VonQuintus and provide input on how to enhance and further develop it. Perhaps by October, representatives from each team could meet and look at how their efforts mesh together. The draft curricula will then be presented at the December TCCC meeting.

In closing discussions, Sorenson commented that there have been many complaints about the fees that AASHTO and others charge for specs. He is trying to work on resolving that. Perhaps there could be a uniform fee structure for training materials.

Bud Darby gave a brief talk on NICET. He is trying to work on bringing NICET and FHWA back together. While NICET cannot do the training, it can do the certification.

Osborn asked if TCCC could pick up \$10,000 of the cost for the Drilled Shaft course. The group agreed to do this.

Chavez, McGee, and Anderson need to send Sorenson estimates of their travel costs for meetings that they may need assistance in attending.

The TCCC will hold its next meeting December 3–4, 2002, at a location still to be determined.

Transportation Curriculum Coordination Council (TCCC)
Santa Fe, New Mexico
June 2002—Activity Plan

Work Plan Activities	Description of Work Plan Activity	Lead	Product Delivery Date
TCCC Pooled Fund Project	Fund has \$195,000 so far. Goal is \$1 million per year for 5 years. This will fund 8–12 projects a year. FHWA HQ (HIAM) will administer the fund. Fund is 100% FA eligible. Private donations are accepted. A pooled fund update will go out in August 2002. Another pooled fund mailing will also be sent.	Task Force Jim Sorenson (FHWA-HIAM) Brian Cawley (FHWA-MRC)	August 2002 (update to go out).
TCCC Executive Director	NHI & HIAM are working on an RFP for a contract for administrative support of the TCCC. This should not exceed 7%–10% of the pool amount. SOW will include maintaining Web site, coordinating meetings, promoting TCCC, and managing pooled fund. Director should be on board before December 2002 TCCC meeting.	Jim Sorenson (FHWA-HIAM)	Director to be on board before Dec. 2002 TCCC meeting.
Core Curriculum Development	Harold Von Quintus made presentation of proposed curriculum. Final draft originally due June 30. It was decided that curricula will be divided into Construction; Materials; Maintenance; Employee Development; and Safety Features, Work Zones, and Worker Safety. Working groups were set up for each curricula track. The teams will look at the draft curricula and provide input on further development. Representatives from teams will meet in October.	Jim Sorenson (FHWA-HIAM) Construction (Allan Samuels) Materials (Woody Hood) Maintenance (Bob Peda) Empl. Dev. (Chris Anderson) Safety (Jack Cowsert)	December 2002
Process for Curriculum Implementation	Develop guidelines for implementation of TCCC products and materials. This issue is tabled until an Executive Director is brought on board through the pooled fund.	Tom Malerk (Florida DOT) Chris Newman (NHI) Garth Newman (ITD)	Dec 2002
National Certification Conference	A TCCC task group has been established to coordinate this potential workshop with the National Training Directors Meeting in 2003. The task group will meet in August 2002. Report to the TCCC due on efforts.	Chris Anderson (Iowa DOT)	Dec 2002

Concrete & Steel Structures Construction Inspector	WAQTC has this course scheduled for development. Procurement of a consultant is on hold for the WAQTC pooled fund project. HIAM & TCCC pooled fund moneys requested to get a contract underway. NDOT would be the probable lead agency for a sole source contract. Interested parties should contact Garth Newman of the Idaho Transportation Department (ITD) or Dean Weitzel of Nevada DOT. ACI training materials will be solicited for incorporation into the new course. An ACI training course has been developed and is currently available.	Garth Newman (ITD) Tom Malerk (Florida DOT)	Dec 2002
Concrete Paving Construction Inspector	Explore the formation of a technical panel (including ACPA) to determine priorities in the development of core materials/curriculum for concrete paving inspector certification. (No activity reported–June 2002).	Bernie Kuta (FHWA–WRC)	
Instructor Development Course	Chris Anderson audited NHI’s instructor development course on April 22-26 for possible modification and utilization by the TCCC. A two-page report was prepared, recommending that a new, shorter course be developed. This new course would use some of the lectures from the current class but not as much of the presentation evaluation material. This should be discussed further at the next TCCC meeting.	Chris Anderson (Iowa DOT) and Chris Newman (NHI)	Put on agenda for discussion at December 2002 TCCC meeting.
Facilitate AASHTO Standard Changes	Tom Baker will forward all proposed WAQTC changes to regional contacts. Jim Sorenson will request that AASHTO wave the fees for use of test methods for member States. Ongoing with no report. Baker has retired and Perry has moved to new position.		
TCCC Web Site	The Web site (www.nhi.fhwa.dot.gov/tccc) made its debut in January 2002 but still needs work. Michael Smith will work with Chris Newman to improve/refine the site. Michelle Cribbs from the Office of Infrastructure can also provide assistance. Michael will provide a Strategic Plan to the TCCC by July 15 and the site will be fully functional by August 15.	Chris Newman (NHI) Michael Smith (FHWA–SRC)	August 2002

Geotechnical Inspection	<p>National geotechnical inspection program headed up by Peter Osborn (FHWA-RI).</p> <ul style="list-style-type: none"> - Walk-throughs for two courses held June 5–6, 2002. - Pilot course for Drilled Shafts scheduled for August 13–15, 2002, in Portland, Oregon. - Pilot Course for Driven Piles scheduled for July 30–August 1, in Milford, MA. <p>Deliverables due September 30, 2002.</p> <p>TWG is looking at developing Driven Pile and Drilled Shaft tutorials next, as well as a Subsurface Investigation course if the funding can be found.</p> <p>NICET certification is available and will be input to TCCC for review and update.</p>	Peter Osborn (FHWA-RI)	September 30, 2002
Training Effectiveness Evaluation	<p>This activity has been combined with planning for a National Certification Conference and with a Benefit/Cost Analysis Study of Training. The TCCC National Training Committee will draft a scope of work to present to TRB for a national synthesis on training effectiveness evaluation/benefit analysis study, as well as a scope of work for a National Certification Conference.</p>	Chris Anderson (Iowa DOT)	
Benefit/Cost Analysis Study of Training	<p>This activity has been combined with the Training Effectiveness Evaluation and planning for National Certification Conference (see above).</p>	Chris Anderson (Iowa DOT)	
Computer-Based Training	<p>Mike Moravec (FHWA) will put together a proposal for the August AASHTO meeting. Allan Samuels (Arizona DOT) will coordinate with Harold VonQuintus (ERES) on developing a matrix for the training. The construction area will be targeted initially.</p>	Mike Moravec (FHWA–ERC) Allan Samuels (Arizona DOT)	August 2002 (proposal for AASHTO meeting)
Resident Engineer Academy	<p>Phase I: Review of programs in California, Washington State, and Maryland/Virginia was done by task group. California's program is a 1-week endeavor designed for newly hired managers and resident engineers. In Washington State, employees have to take courses until they get to a level where they're running projects on their own. Maryland has a minimal involvement program. Each program was unique with a few common elements and could be applied according to a State DOT's needs and sophistication level. Tim Chavez of NMSHTD noted that the model from WA will be followed in NM and is working in that direction. A written summary report will be prepared prior to the AASHTO Subcommittees on Materials and Construction meetings in August 2002.</p> <p>Phase II: Develop a course for resident engineers around core best practices.</p>	Bill Beuter (VDOT) Tim Chavez (NMSHTD)	Aug 2002

Managing Construction Workmanship	AASHTO SOC initiated to capture experience before retirements. Allan Samuels (Arizona DOT) has been working on a Qualitative Check List. NHI construction workmanship initiative. Outline available. Awaiting bids for next phase of course development. RFP to go out in mid June.	Chris Newman (NHI)	
Training for High Strength Bolting Installers for Overhead Sign Structures	Woody will conduct a survey of States to determine need for training. Problem statement will be developed; target date for survey is the end of March 2002.	Woody Hood (Maryland DOT)	Jan 2002
Training for Profilers	MD DOT is developing courses on operator certification and construction inspector training in concert with RPUG findings. NHI courses are being developed on "Measuring And Interpreting Road Profiles" and "Factors Affecting Inertial Profile Measurements for Construction Quality Control." NHI will provide an update at the June 2002 TCCC meeting. MD DOT operator construction inspection course should be ready by June 2002.	NHI, Mid-Atlantic Regional Group	Mar 2002
Training for Non-Nuclear Density Gage	Research efforts are ongoing. Update will be provided at the next TCCC meeting.	Lee Gallivan (FHWA--IN) Tom Malerk (Florida DOT)	June 2002
National Pollution Discharge Elimination System / EPA	John Perry, FHWA-HIAM, and Lee Onstott, NMSHTD, to distribute materials to TCCC group. The NPDES PowerPoint presentation by NM-AGC/EPA will be available on TCCC's Web site in late January 2002 at www.nhi.fhwa.dot.gov/tccc .	Joe Kinnikin (NM-AGC) John Perry (FHWA-HIAM)	Mar 2002
Pavement Distress and Performance Measurements	Courses are complete and NHI will distribute CDs to the TCCC. Three CDs available and distributed. PCCP Design Details & Construction Practices Course #131060, PCCP Course #131062, HMA Course #131063.	Chris Newman (NHI)	Jan 2002
Training and Certifications for Maintenance Technicians with MPPP	TCCC activities will be shared with the Midwestern Partnership for Pavement Preservation (MPPP) for inclusion in pavement preservation activities and shared with Julie Trunk, FHWA-HIAM. Update to be provided by April 2002.	Lee Gallivan (FHWA-IN)	June 2002
Work Zone Traffic Control Safety	Four NHI courses are under development. A New Jersey DOT computer course is currently available. Celso Gatchilian, FHWA-HIAM, and Jim Sorenson, FHWA-HIAM, will provide support to Jack Cowser, NC-DOT.	Jack Cowser (NC-DOT)	June 2002

Construction Contract Administration	Survey States to identify the basic principles of contract administration courses for project level administrators, availability, and core content. Contact ASCE; Bill Hakala, FHWA-WRC; and Gerry Yakawenko, FHWA-HIPA, to identify States with courses.	Bill Beuter (VDOT) ??? (FHWA-HIAM)	June 2002
Embankment and Base Inspection	New England (NETTCP) has a soils and aggregate inspector course available. FHWA has an inspection course available for soils and base course construction. The Mid-Atlantic Regional Group offers a course for soils and aggregate compaction. IA State University and IA DOT also have certification courses in soils and aggregate compaction. Coordinate with Peter Osborn, FHWA-RI.	Garth Newman (ITD)	June 2002
Field Structural Coatings Inspection	Activities are underway by FHWA, AASHTO, SSPC, NACE & eight States. An ETG was formed during the Winter of 2001-02 and met in April. A training course is scheduled to be online in the Winter of 2002-03 that will result in a "baseline certification." Other modules will be for specialty topics in coatings. Funding has been requested from TCCC.	Greg Doyle (FHWA-MA, NETTCP)	Jan 2003
QA Technologist	Course under development by NHI Contractor (Fugro-BRE) was determined insufficient in November 2001. A new consultant was selected by NETTCP (Atech-Center) and a pilot course scheduled for November 2002 in Methuen, MA. Course is being prepared "generically" for use by States or Regional Groups. Coordinate with NETTCP to provide final course. Part of the \$69,750 contract has been requested from TCCC.	Greg Doyle (FHWA-MA)	Jan 2003

Blue titles indicate that an update was provided in Santa Fe, NM, on June 11-12, 2002.